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10/722,926	11/26/2003	Richard F. Boehme	YOR920030420US1	1895

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EXAMINER
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ART UNIT	PAPER NUMBER
3629	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)	
Office Action Summary	10/722,926	BOEHME ET AL.	
	Examiner	Art Unit	
	Gabrielle McCormick	3629	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>15 April 2009 and 23 April 2009</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>41-60</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>41-60</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>23 April 2009</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

U.S. Patent and Trademark Office

PTOL-326 (Rev. 08-06)   **Office Action Summary**   Part of Paper No./Mail Date 20090501

DETAILED ACTION

Status of Claims

1.   This action is in reply to the amendments filed on April 15, 2009.

2.   Claim 41 has been amended.

3.   Claims 42-60 have been added.

4.   Claims 41-60 are currently pending and have been examined.

Drawings

5.   Applicant has submitted amended drawings (filed April 23, 2009) which overcome the previous objection. The objection is withdrawn.

Claim Rejections - 35 USC § 112

6.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

>   The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7.   Claims 54 and 55 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

8.   The preambles of claims 54 and 55 refer to "A computer system as in claim 53". Claim 53 is directed to a "computer readable storing medium", therefore it is unclear whether claims 54 and 55 are directed toward a system or product claim, and subsequently which statutory class they belong in.

Previous Claim Rejections - 35 USC § 101

9.   The amendment to claim 41 is sufficient to overcome the previous rejection under 35 U.S.C. 101.

The rejection is withdrawn.

Claim Rejections - 35 USC § 103

10.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness

rejections set forth in this Office action:

> A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

11.   <u>Claims 41-60</u> are rejected under 35 U.S.C. 103(a) as being unpatentable over Stone Middle

School ("Automating Authentic Assessment with Rubrics" retrieved from the Internet Archive at

http://web.archive.org/web/20021120071617/http://stone.web.brevard.k12.fl.us/html/comprubric.h

tml   and

http://web.archive.org/web/20021109142902/stone.web.brevard.k12.fl.us/html/teacheval.html,

hereinafter referred to as "Stone") in view of Trenholm et al. (US Pat. No. 6,120,299, hereinafter

referred to as "Trenholm") in view of Strubbe et al. (US Pat 6,721,706, hereinafter referred to as

"Strubbe").

12.   **Claims 41, 46, 47, 48, 53, 54 and 55:** Stone discloses

- *selecting, though a computer system, a rubric having associated rubric information, where*

  said rubric information includes at least one benchmark, at least one criteria associated with

  each said at least one benchmark, and at least one score associated with each said at least

  one benchmark; (pg. 3; "One Solution…": the rubric is defined to include a scoring guide for

  behaviors (i.e., **benchmarks**) that respond to the same **prompt** (i.e., **criteria**) (therefore the

  rubric comprises the scoring guide, behaviors and prompts) and pg. 4;

"Recommendations…": "Use rubric for an evaluation of an presentation or activity", thus, a rubric is selected for use.)

- *receiving, from an input device, contextual assessment input information associated with an entity, said contextual assessment input information comprising an identification of a combination of the entity, an input type and the rubric;* (pg. 4; "Rubric…": "Recording performance can be simplified with computerized form", thus machine-readable representation of assessment input information is inputted and pg. 4; "Utilizing…": "Following the activity or performance an individualized report to each student is easily printed with the students own score in each field", thus the information is inputted such that a combination of the entity (each student) and the rubric is made. The input type is inherently associated as the information is inputted into the computerized form.)

- *converting, by the computer system, the contextual assessment input information into a machine readable representation;* (pg. 5: "Newtons boast handwriting recognition" and "Newtons will download their information into Macintosh or Windows computers", thus the information is input as handwriting and converted in order to be downloaded.)

- *mapping, said machine readable representation of said contextual assessment input information to said rubric information to yield results of said mapping and;* (pg. 4; "Utilizing…": "Following the activity or performance an individualized report to each student is easily printed with the students own score in each field", thus the "report" contains the mapped information.)

- *storing, by the computer system, said results of said mapping;* (pg. 4; "Utilizing…": In order to create the "individualized report", the results of the mapping are inherently stored and pg. 5: "Newtons can hold performance assessment databases.")

- *where said contextual assessment input information includes an assessment element, and where mapping said contextual assessment input information to said rubric information includes mapping said assessment element to at least one matching benchmark included within said rubric information and further includes mapping said contextual assessment input*

information to said at least one matching criteria and to said at least one matching score associated with said matching benchmark; (pg. 4; "Utilizing…": "Following the activity or performance an individualized report to each student is easily printed with the students own score in each field")

- *where the storing the results of the mapping includes storing said matching score and any combination of said matching benchmark, said matching criteria, identification of said entity and of said rubric.* (pg. 4; "Utilizing…": "Following the activity or performance an individualized report to each student is easily printed with the students own score in each field", thus the "report" contains the stored mapped information.)

13.   NOTE: Though the Examiner has provided art for the various forms of information (i.e., rubric, benchmark, criteria, score, contextual assessment input, identification and input type), the type of information is non-functional descriptive are not functionally involved in the steps recited. **The entry of information would be performed regardless of the type of information.** Thus, this descriptive data will not distinguish the claimed invention from the prior art in terms of patentability, *see In re Gulack,* 703 F.2d 1381, 1385, 217 USPQ 401, 404 (Fed. Cir. 1983); *In re Lowry,* 32 F.3d 1579, 32 USPQ2d 1031 (Fed. Cir. 1994).

14.   NOTE: The term, *mapping,* is defined in the specification as "deciphering and matching" (pg. 10; line 10), thus Stone discloses mapping by recording performance with a computerized form and printing an individualized report with each student's own scores in each field. (pg. 4)

15.   Stone further discloses that a rubric should be revised as necessary (pg. 4; "Recommendations…", but does not explicitly state creating *a new benchmark within said rubric information during mapping of said contextual assessment input information to said matching benchmark.* Stone also does not explicitly disclose that the mapping is performed by the computer system with a processor.

16.   Trenholm, however, discloses an "item scoring matrix is a data structure designed to contain the weights and possible scores on the features which make up the item" (C6; L1-3). The item is a criterion of the test, the features are benchmarks and the item scoring matrix is the equivalent of

a rubric. Further, a feature can have variables with criteria specification that define how the possible variables are translated into a score. (C6; L38-45). Thus, Trenholm discloses rubrics with criteria, benchmarks and scores. The test response (C5; L41-43) is the contextual assessment input that is evaluated by the computer using the appropriate test scoring and item scoring matrices (i.e., rubrics) (C9; L31-32: the system calls a scoring engine to score the selected item according to a predefined rubric). The computer performs mapping (deciphering and matching) of the responses (C6; L28-31: "The computer may check for the presence or absence of a particular feature or may check for specific values for individual feature criteria") and scoring (C6; L21-27: "through evaluating individual features...the computer is able to determine a score for the item"). During interactive scoring mode, the user can make changes to the scoring rubric if the user determines that the rubric is flawed (C4; L27-34 and C11; L38-56: the user can adjust the weighting of a feature or change limits, further the user can modify the rubric for any reason and C3; L11-13: the parameters of the benchmark are changed from 4-6 ft to 5-6 ft, thus a new benchmark is established) after which the changed rubric is used to rescore the item (i.e., the assessment input), thus as a final score is not produced until after the rubric is modified, the new benchmark is created during the mapping of the assessment input information.

17.   Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included creating a new benchmark, as disclosed by Trenholm in the system disclosed by Stone, for the motivation of providing a method of ensuring that the rubric is pertinent to the activity or performance that is being assessed. As Stone discloses the need to revise the rubric, it is obvious to include a means to make the revisions, by Trenholm provides.

18.   Strubbe discloses a computer that parses data derived from conversations and matches to an appropriate template in a data store (C31; L19-42). Additionally, the computer learns new responses by adding a person's response to the response template (C18; L53-63 and (C25; L2-10). Thus, new information is added to a specific template (such as would be the case with a new benchmark in a rubric) during the computer's processing of the input to detect matches in order to formulate an appropriate response. As the computer performs deciphering of the speech

and matching keywords (C18; L5-17), the creation of a new response in an existing template occurs during mapping.

19.   Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have included using a computer to detect new information and add it to a database, as disclosed by Strubbe, in the system of Stone for the motivation of facilitating the revision of rubrics through artificial intelligence. It is old and well known to make changes to or create new benchmarks, even during the collection of assessment data. For example, it is old and well known that students are assessed on oral presentation skills. It is also old and well known that some students have disabilities that impact their oral presentation skills, such as speech impediments. Therefore, it is obvious that a teacher would set a new or revised benchmark for a student with a known speech impediment during the student's presentation so as not to unfairly penalize the student. Perhaps the teacher would add a benchmark regarding eye-contact or posture in place of a benchmark regarding the nature of the speech mechanics. This is obvious to do so because Federal regulations would require the school to make a reasonable accommodation.

20.   The combination of Stone and Strubbe would produce a PDA that gathered assessment data using speech-to-text conversion that upon the identification of new information, would be capable of adding the new information to the appropriate rubric database.

21.   **Claims 42, 43, 44, 45, 49, 50, 51, 53, 56, 57, 58 and 59:** Stone does not disclose that the input device comprises a video or digital camera or a microphone or converts audio or visual contextual assessment input information into machine readable representation.

22.   Strubbe, however, discloses audible speech as input (C8; L62-63); video input (C12; L10-15 and C21; L35-45) and photographic input (C29; L3-9). Though Strubbe does not specify a digital camera, it is old and well known that both still cameras and video cameras employ digital technology.

23.   Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have included video, digital and audio inputs, as disclosed by Strubbe, in the system of Stone

for the motivation of providing a variety of data capture choices. As the technologies are old and well known, it is obvious to combine them with Stone, who uses a handheld computing system, because it is merely a combination of old elements, and in the combination, each element merely would have performed the same function as it did separately, and one of ordinary skill in the art would have recognized that the results of the combination were predictable.

24. NOTE: As the claims state that the input device **comprises** a video camera (example), the contextual assessment input information received from the input device is not understood to claim video data as input device data. Rather, it is understood that the video camera is a component of the input device and that input data may be of a form different than video. Similarly, any data received from a microphone or digital camera does not limit the input data to the respective component.

25. **Claim 60:** Stone discloses the rubric comprising multiple levels represented by an interface technique. (pg. 5: a drop down menu is pictured and pg. 2 of 4 ("Use the Power of Technology; Tim Cool quote: uses pull down screens to select phrases that relate to areas to be observed (thus multiple levels of criteria are represented by an interface technique)).

Response to Arguments

Applicant's arguments with respect to claim 41 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH

shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gabrielle McCormick whose telephone number is (571)270-1828. The examiner can normally be reached on Monday - Thursday (5:30 - 4:00 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Weiss can be reached on 571-272-6812. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/G. M./
Examiner, Art Unit 3629

/JOHN G WEISS/
Supervisory Patent Examiner, Art Unit 3629